



DOCKET NO. ASP-10

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Peter Zhu et al.  
Serial No.: 09/746,344 Art Unit: 1724  
Filed : December 22, 2000 Examiner: Chester T. Barry  
For : DEVICE AND METHOD OF USE FOR ALDEHYDE REMOVAL

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October 29, 2003

(Date)

Theodore J. Shatynski

Name of applicant, assignee, or Registered Representative

Theodore J. Shatynski  
(Signature)

October 29, 2003

(Date of Signature)

AUTHORIZATION TO CHARGE DEPOSIT ACCOUNT

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Dear Sir:

Attached is an Appeal Brief for the above-captioned patent application.

Please charge Deposit Account No. 10-0750/ASP-10/TJS in the name of Johnson & Johnson in the amount of \$320.00, representing the cost of filing a Brief on Appeal in the above-captioned matter.

The Commissioner is hereby authorized to charge any additional fees which may be required to Account No. 10-0750/ASP-10/TJS. This Authorization is being submitted in triplicate.

Respectfully submitted,

Theodore J. Shatynski

Theodore J. Shatynski  
Attorney for Applicant(s)  
Reg. No. 36,676

Johnson & Johnson  
One Johnson & Johnson Plaza  
New Brunswick, NJ 08933-7003  
(732) 524-2498  
DATED: October 29, 2003



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*Theodore J. Shatynski*

(Signature)

October 29, 2003

(Date of Signature)

Mail Stop Appeal Brief- Patents  
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Alexandria, VA 22313-1450

ATTENTION: BOARD OF PATENT APPEALS AND INTERFERENCES

**APPELLANTS' BRIEF (37 C.F.R. 1.192)**

This is an appeal from the final rejection mailed March 31, 2003, a Notice of Appeal having  
been received by the USPTO June 30, 2003. Appellants' Brief is being submitted on October 30,  
2003 with a two-month extension of time concurrently requested with this brief.

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The fees required under Section 1.17(f), and any required petition for extension of time for filing this brief and fees therefor, are addressed with in the accompanying TRANSMITTAL OF APPEAL BRIEF.

This brief is transmitted in triplicate. (37 CFR 1.192(a))

This brief contains these items under the following headings, and in the order set forth below (37 CFR 1.192(c)):

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1. REAL PARTY INTEREST

The real party in interest of the subject patent application is Ethicon, Inc. having a principal place of business at U.S. Route #22, Somerville, NJ 08876.

2. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences pending.

3. STATUS OF CLAIMS

3.1 Claim 22 stands rejected under 35 U.S.C. §102(b) as anticipated by U.S. 5,998,184 (Shi).

3.2 Claims 22-26, and 31 stand rejected under 35 U.S.C. §103(a) as obvious over Shi and U.S. 5,534,143 (Portier).

3.3 Claims 22-31 stand rejected under obviousness double patenting over claim 15 of U.S. 6,399,850 (Chen).

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3.4 Claims 22-24 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. 6,210,566 (King), U.S. 4,780,315 (Wu), and JP 7204661 (Nagata).

3.5 Claims 22-24 and 31 stand rejected under 35 U.S.C. §102(e) over U.S. 6,399,850 (Chen).

3.6 Claims 22-25 stand rejected under 35 U.S.C. §102(e) over U.S. 6,068,980 (Decor) and claims 22, 23 and 25 stand rejected over U.S. 5,290,440 (Pirkle).

#### 4. STATUS OF AMENDMENTS

No amendments after Final Rejection have been filed.

#### 5. SUMMARY OF INVENTION

The present invention is related to a device for removing aldehydes from a waster stream comprising:

- a) a container with an inlet and an outlet; and
- b) a source of solid primary amine enclosed within the container, wherein the solid primary amine neutralizes and removes the aldehyde from the waste stream. (Claim 22)

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The device of this invention offers an advantage over other typical devices using chemicals such as ammonia, sodium bisulfite, or other chemicals to neutralize aldehydes since nothing further is required to be added to a waste as the waste is simply passed through the scavenging device which binds the aldehyde and prevents its discharge into the environment. (Spec., page 3, line 28 to page 4, line 3).

6. STATEMENT OF ISSUES

6.1 Whether claim 22 is unpatentable under 35 U.S.C. § 102(b) in view of Shi.

6.2. Whether claims 22-26, and 31 are unpatentable under 35 U.S.C. §103(a) as obvious over Shi and U.S. 5,534,143 (Portier).

6.3 Whether claims 22-31 are unpatentable under obviousness double patenting over claim 15 of U.S. 6,399,850 (Chen).

6.4 Whether claims 22-24 and 31 are unpatentable under 35 U.S.C. §103(a) over U.S. 6,210,566 (King), U.S. 4,780,315 (Wu) and JP 720466 (Nagata).

6.5 Whether claims 22-24 and 31 are anticipated under § 102(e) by U.S. 6,399,850 (Chen).

6.6 Whether claims 22-25 are anticipated under § (102)(e) over U.S. 6,068,980 (Decor) and whether claims 22, 23 and 25 are anticipated by U.S. 5,290,440 (Pirkle).

7. GROUPING OF CLAIMS

For the purpose of the appeal, all groups of claims stand and fall together.

8. ARGUMENTS

8.1 Claim 22 is not anticipated by Shi

As is well settled, anticipation requires that each and every element of the claimed invention be disclosed in a single prior art reference. Shi fails to anticipate Appellant's invention because the claimed limitations of wherein "a solid primary amine neutralizes and removes the aldehyde from the waste stream" is not identically disclosed. This is not merely a matter of intended use because the presence and removal of an aldehyde from a waste stream is part of the body of claim 22. Therefore the Examiner's §102 (b) rejection is respectfully requested to be reversed.

8.2 Claims 22-26, 31 are not obvious under 35 U.S.C. §103(a) over Shi in view of U.S. 5,534,143 (Portier).

The Appellant submits that the Examiner has improperly combined the references in rejecting Appellants' invention. Shi is directed toward bioreactors which has one component of the bioreactor system a device which immobilizes cells cultured in the bioreactor with a cell supporting material ("CSM"). Representative supporting materials include "fibre-cell disks....or porous

ceramics, sponge, fibers, porous beads, and peptide-coated beads” col. 2, lines 10-16. Portier, on the other hand, discloses a microbubble generator for optimizing the rate and amount of oxygen transfer to microbial inocula or biocatalysts in bioreactor systems. Portier also discloses an associated “immobilized cell reactor” useful in the detoxification and cleanup of non-volatile polymeric and volatile organic-contaminated aqueous streams. The items that are immobilized are “microorganisms” col. 6, line 31’ which are biocatalysts. These biocatalysts do not remove anything from the effluent.

In contrast, Appellant’s invention binds the aldehydes present in waste thus preventing passage of the aldehyde in the effluent. There is no reaction as described in Portier which “breaks down” toxic organic compounds to non-toxic components (col. 6, lines 31-35). Clearly, the Examiner has impermissibly combined bioreactive art to render Appellants’ aldehyde waste removal device obvious. As noted above, Appellant’s invention is not a matter of intended use because the presence and removal of an aldehyde from a waste stream is part of the body of the rejected claims. Therefore this rejection is respectfully requested to be reversed.

8.3 Claims 22-31 are not obvious under obvious type double patenting over claim 15 of US 6,399,850 (Chen).

Appellant submits that the Examiner’s double-patenting rejection is improper. Claim 15 is not specific with regard to all the ways in which aldehydes may be neutralized. While claim 15 may be broad, Applicants submit that the present invention is patentable and an advance over known aldehyde treatment devices, namely that the aldehyde is removed from the effluent stream rather than simply treating the aldehyde which in turn would pass out of the device’s effluent. Therefore, Appellant respectfully requests reversal of the Examiner’s rejection.



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8.4 Claims 22-24, 31 are not obvious under §103(a) over US 6,210,566 (King), US 4,780,315 (Wu) and JP 7204661 (Nagata).

The Appellant submits that the Examiner has improperly combined the references in rejecting Appellant's invention.

King is concerned with nestable containers that can be inserted into a dispenser for dispensing of dispersants and minerals to kill both bacteria and algae in recirculating water systems commonly used in swimming pools, spas and the like (col. 1, lines 5-12). Wu is directed toward rumen-stable compositions for coating medicaments and nutrients for ruminant animals (Abstract). The pellets are for oral administration (col 1, lines 5-9). Nagata is directed toward a glutaraldehyde waste water treatment agent and method that renders residual glutaraldehyde of a waste stream inactive.

The Examiner submits it would be obvious to combine King, Wu and Nagata to arrive at Appellant's invention. However, Appellant submits that there is no motivation to combine the orally administered pellets of Wu with the swimming pool canister of King and the waste water treatment agents of Nagata. Clearly, Appellant's invention solves a problem by removing an aldehyde from a waste stream rather than mere treatment of an aldehyde which is discarded in an effluent stream. The Examiner's rejection is respectfully requested to be reversed.

8.5 Claims 22-24 and 31 are not anticipated by Chen.

The Examiner submits that claims 22-24 and 31 are anticipated by Chen. However, Chen while treating an aldehyde with a solid primary amine, the treated aldehyde leaves the treatment container as an effluent. In the present invention, the aldehyde is removed from the wastestream

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by containers with a solid primary amine. The solid primary amine is immobilized in the container. Chen therefore does not identically disclose the Applicants' invention and the Examiner's rejection is respectfully requested to be reversed.

8.6 Claims 22-25 are not anticipated under §102(e) in view of Décor and claims 22, 23 and 25 are not anticipated by US. 5,290,440 (Pirkle).

The Examiner also rejected claims 22-25 under §102(e) as anticipated by US 6,068,980 (Décor). The Examiner also rejected claims 22, 23 and 25 as anticipated by US 5,290,440 (Pirkle). These rejections are respectfully requested to be reversed for the reasons already provided in response to the Examiner's previous §102 rejections, namely that neither Décor nor Pirkle identically disclose the Appellant's invention; such responses are hereby incorporated by reference. Thus, the §102 rejections in view of Décor and Pirkle are respectfully requested to be reversed.

#### 8.6 CONCLUSION

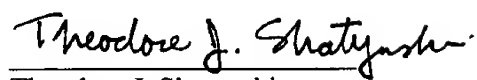
For the foregoing reasons, the reversal of the rejections relating to claims 22-31 are respectfully requested.

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9. APPENDIX OF CLAIMS INVOLVED IN THE APPEAL

(See attached)

Respectfully submitted,



Theodore J. Shatynski  
Reg. No. 36,676

Johnson & Johnson  
One Johnson & Johnson Plaza  
New Brunswick, NJ 08933  
(732)524-2498  
Dated: October 29, 2003

**APPENDIX OF CLAIMS INVOLVED IN THE APPEAL**

22. A device for removing aldehydes from a waste stream comprising:
- a) a container with an inlet and an outlet; and
  - b) a source of solid primary amine enclosed within the container, wherein the solid primary amine neutralizes and removes the aldehyde from the waste stream.
23. The device of claim 22, wherein the solid primary amine is a solid chemical comprising at least one primary amino group.
24. The device of claim 23, wherein the solid primary amine is in the form of an animated surface having primary amine functionality.
25. The device of claim 23, wherein the animated surface comprises the primary amine chemically bonded to a silica supporting material.
26. The device of claim 25, wherein the primary amine is a polymer or co-polymer comprising a primary amino group.
27. The device of claim 26, wherein polymer or co-polymer comprises tris(2-aminoethyl)amine linked to poly(styrene-co-divinylbenzene) or diethylenetriamine linked to a peptide resin.
28. The device of claim 24, wherein the animated surfaces are selected from the group consisting of animated polysaccharides, chitosan, and mixtures thereof.
29. The device of claim 24, wherein the animated surface is silica-polyallyamine intercalate.

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30. The device of claim 24, wherein the animated surface is animated dextran.
31. The device of claim 22 further comprising a valve to control the flow of the waste stream.